CLAIMS:

What is claimed is:

1. A method in a data processing system for managing traffic in a network data processing system, the method comprising:

monitoring traffic for a plurality of network paths; and

responsive to a packet for a particular network path within the plurality of network paths causing traffic for the particular network path to exceed a level of traffic allowed, reducing an amount of bandwidth available based on a fair share for the particular network path.

2. The method of claim 1, wherein the traffic is measured using at least one of a data transfer rate, peak data transfer rate, burst size, and maximum packet size.

3. The method of claim 1, wherein the reducing step comprises:

reducing a congestion window size.

4. The method of claim 3, wherein the congestion window size is reduced as follows:

CW = max(MinW, min(CW*F,MaxW))

wherein CW is the congestion window size, MinW is a minimum congestion window size for the particular network path, MaxW is a maximum congestion window size for the particular network path, F is a fraction to cut the congestion window size for the particular network path.

5. The method of claim 1, wherein the reducing step comprises:

setting a type of service for packets sent using the particular network path.

6. The method of claim 1, wherein the reducing step comprises:

dropping the packet.

7. A method in a data processing system for managing traffic in a network data processing system, the method comprising:

monitoring aggregate traffic for each of a plurality of network paths; and

responsive to aggregate traffic for a selected network path exceeding a threshold, reducing the aggregate traffic for the selected network path.

8. The method of claim 7, wherein the aggregate traffic includes at least one of a data transfer rate, peak data transfer rate, burst size, and maximum packet size.

9. The method of claim 7, wherein the reducing step comprises:

reducing a congestion window size.

10. The method of claim 7, wherein the reducing step comprises:

reducing a sending size for data packets.

11. The method of claim 7, wherein the reducing step comprises:

changing a type of server for data packets for the selected network path.

12. The method of claim 7, wherein the threshold takes into account a fair share of bandwidth available for the plurality of network paths.

13. A data processing system comprising:

a bus system;

a communications unit connected to the bus, wherein data is sent and received using the communications unit;

a memory connected to the bus system, wherein a set of instructions are located in the memory; and

a processor unit connected to the bus system, wherein the processor unit executes the set of instructions to monitor traffic for a plurality of network paths; and reduce an amount of bandwidth available based on a fair share for the particular network path in response to a packet for a particular network path within the plurality of network paths causing traffic for the particular network path to exceed a level of traffic allowed.

14. The data processing system of claim 13, wherein the bus system includes a primary bus and a secondary bus.

15. The data processing system of claim 13, wherein the processor unit includes a single processor.

16. The data processing system of claim 13, wherein the processor unit includes a plurality of processors.

17. The data processing system claim 13, wherein the communications unit is an Ethernet adapter.

18. A data processing system comprising:

a bus system;

a communications unit connected to the bus, wherein data is sent and received using the communications unit;

a memory connected to the bus system, wherein a set of instructions are located in the memory; and

a processor unit connected to the bus system, wherein the processor unit executes the set of instructions to monitor aggregate traffic for each of a plurality of network paths; and reduce the aggregate traffic for the selected network path in response to aggregate traffic for a selected network path exceeding a threshold.

19. The data processing system of claim 18, wherein the bus system includes a primary bus and a secondary bus.

20. The data processing system of claim 18, wherein the processor unit includes a single processor.

21. The data processing system of claim 18, wherein the processor unit includes a plurality of processors.

22. The data processing system claim 18, wherein the communications unit is an Ethernet adapter.

23. A data processing system for managing traffic in a network data processing system, the data processing system comprising:

monitoring means for monitoring traffic for a plurality of network paths; and

reducing means, responsive to a packet for a particular network path within the plurality of network paths causing traffic for the particular network path to exceed a level of traffic allowed, for reducing an amount of bandwidth available based on a fair share for the particular network path.

24. The data processing system of claim 23, wherein the traffic is measured using at least one of a data transfer rate, peak data transfer rate, burst size, and maximum packet size.

25. The data processing system of claim 23, wherein the reducing means comprises:

means for reducing a congestion window size.

26. The data processing system of claim 25, wherein the congestion window size is reduced as follows:

CW = max(MinW, min(CW*F,MaxW))

wherein CW is the congestion window size, MinW is a minimum congestion window size for the particular network path, MaxW is a maximum congestion window size for the particular network path, F is a fraction to cut the congestion window size for the particular network path.

27. The data processing system of claim 23, wherein the reducing means comprises:

setting means for setting a type of service for packets sent using the particular network path.

28. The data processing system of claim 23, wherein the reducing means comprises:

dropping means for dropping the packet.

29. A data processing system for managing traffic in a network data processing system, the data processing system comprising:

monitoring means for monitoring aggregate traffic for each of a plurality of network paths; and

reducing means, responsive to aggregate traffic for a selected network path exceeding a threshold, for reducing the aggregate traffic for the selected network path.

30. The data processing system of claim 29, wherein the aggregate traffic includes at least one of a data transfer rate, peak data transfer rate, burst size, and maximum packet size.

31. The data processing system of claim 29, wherein the reducing means comprises:

means for reducing a congestion window size.

32. The data processing system of claim 29, wherein the reducing means comprises:

means for reducing a sending size for data packets.

33. The data processing system of claim 29, wherein the reducing means comprises changing a type of server for data packets for the selected network path.

34. The data processing system of claim 29, wherein the threshold takes into account a fair share of bandwidth available for the plurality of network paths.

35. A computer program product in a computer readable medium for managing traffic in a network data processing system, the computer program product comprising:

first instructions for monitoring traffic for a plurality of network paths;

second instructions, responsive a packet for a particular network path within the plurality of network paths causing traffic for the particular network path to exceed a level of traffic allowed, for reducing an amount of bandwidth available based on a fair share for the particular network path.

36. The computer program product of claim 35, wherein the traffic is measured using at least one of a data transfer rate, peak data transfer rate, burst size, and maximum packet size.

37. The computer program product of claim 35, wherein the reducing step comprises:

third instructions for reducing a congestion window size.

38. The computer program product of claim 37, wherein the congestion window size is reduced as follows:

CW = max(MinW, min(CW*F,MaxW))

wherein CW is the congestion window size, MinW is a minimum congestion window size for the particular network path, MaxW is a maximum congestion window size for the particular network path, F is a fraction to cut the congestion window size for the particular network path.

39. The computer program product of claim 35, wherein the second instructions comprises:

instructions for setting a type of service for packets sent using the particular network path.

40. The computer program product of claim 35, wherein the second instructions comprises:

instructions for dropping the packet.

41. A computer program product in a computer readable medium for managing traffic in a network data processing system, the computer program product comprising:

first instructions for monitoring aggregate traffic for each of a plurality of network paths; and

second instructions, responsive to aggregate traffic for a selected network path exceeding a threshold, for reducing the aggregate traffic for the selected network path.

42. The computer program product of claim 41, wherein the aggregate traffic includes at least one of a data transfer rate, peak data transfer rate, burst size, and maximum packet size.

43. The computer program product of claim 41, wherein the second instructions comprises:

instructions for reducing a congestion window size.

44. The computer program product of claim 41, wherein the second instructions comprises:

instructions for reducing a sending size for data packets.

45. The computer program product of claim 41, wherein the second instructions comprises:

instructions for changing a type of server for data packets for the selected network path.

46. The computer program product of claim 41, wherein the threshold takes into account a fair share of bandwidth available for the plurality of network paths.